



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,121	09/18/2006	Dong Li		9388
65443	7590	01/20/2010	EXAMINER	
DONG LI			KOVALICK, VINCENT E	
1101 BEAUMONT CENTRE LANE #23101				
LEXINGTON, KY 40513			ART UNIT	PAPER NUMBER
			2629	
			MAIL DATE	DELIVERY MODE
			01/20/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,121	LI, DONG	
	Examiner	Art Unit	
	VINCE E. KOVALICK	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 September 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-51 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,5-10,12-19,26,28-31,33-41,48,50 and 51 is/are rejected.
 7) Claim(s) 3,4,11,20-25,27,32,42-47 and 49 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 18 September 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/18/2006</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

/Vincent E Kovalick/

Examiner, Art Unit 2629DETAILED ACTION

1. This Office Action is in response to Applicant's Patent Application, Serial No. 10/593,121, with a File Date of September 18, 2006.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-6, 7-10, 12-17, 26, 30-31, 33-37, 40 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCormick (Pub. no US 2002/0035484), taken with Otobe (Pub. No. US 2004/0010599) in view of Yanagisawa et al. (Pub. No. US 2002/0046887) and further in view of Kisliakov (Pub. No. US 2003/0212635) taken with Carew et al. (Pub. No. US 2003/0154069) herein after referred to as (MOYKC).

Relative to claims 1 and 31 McCormick teaches a system and method of generating a medication prescription (pgs. 1-2, paras. 0012-0019); McCormick further teaches a portable terminal with a keypad area formed by at least one key, further comprising: a sensing surface, formed by at least one sensing unit placed in the keypad area of the portable terminal (pg. 6, para. 0066 and Fig. 3A item 424).

McCormick does not teach, generating multidimensional coordinates data from the trajectory of the movement of the said sensing object via the said sensing unit; a microprocessor, for processing the said multidimensional coordinates data and for generating at least one candidate text; a screen for displaying the said at least one candidate text; the desired text can be selected from the said at least one candidate text by pressing the said at least one key, and be displayed on the said screen.

McCormick further teaches a screen for displaying the said at least one candidate text (pg. 6, para. 0066).

Otobe teaches a distribution system and method (pgs, 2-4, paras. 0029-0033); Otobe further teaches a sensing object, for writing at least partial information of a desired text on the said sensing surface (pg. 16, claim 7).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick the feature as taught by Otobe in order to provide the instrument to enable writing on a sensing surface.

McCormick taken with Otobe does not teach generating multidimensional coordinate's data from the trajectory of the movement of the said sensing object via the said sensing unit; a microprocessor, for processing the said multidimensional coordinates data and for generating at least one candidate text; a screen, for displaying the said at least one candidate text; the desired text can be selected from the said at least one candidate text by pressing the said at least one key, and be displayed on the said screen.

Yanagisawa et al. teaches a coordinate input apparatus (pgs. 1-4, paras. 0001-0032); Yanagisawa et al. further teaches generating multidimensional coordinates data from the trajectory of the movement of the said sensing object via the said sensing unit (pg. 4, para 0045). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe the feature as taught by Yanagisawa et al. in order to provide the means to generate the coordinates of the sensing object on the sensing surface.

McCormick taken with Otobe in view of Yanagisawa et al. does not teach a microprocessor, for processing the said multidimensional coordinates data and for generating at least one candidate text; a screen, for displaying the said at least one candidate text; the desired text can be selected from the said at least one candidate text by pressing the said at least one key, and be displayed on the said screen.

Kisliakov teaches a configurable input device (pgs. 1-2, paras. 0010-0013); Kisliakov further teaches a microprocessor, for processing the said multidimensional coordinates data and for generating at least one candidate text (pg. 20, para. 0281),

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. the feature as taught by Kisliakov in order to provide the means processing the coordinate data and providing access to the related candidate text from the system storage means.

McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov does not teach the desired text can be selected from the said at least one candidate text by pressing the said at least one key, and be displayed on the said screen.

Carew et al. teaches computerized system and method for converting selected text between languages (pgs. 1-2, paras. 0009-14); Carew et al. further teaches the desired text can be selected from the said at least one candidate text by pressing the said at least one key, and be displayed on the said screen (pg. 3, para. 0029).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov the feature as taught by Carew et al. in order to provide the means to select the desired text from a candidate text by pressing one key on the unit screen

Regarding claims 6-7 and 34-35 McCormick further teaches an apparatus wherein the said at least one key is located on the outer surface of the portable terminal; and an apparatus wherein the said sensing unit is coupled with the said at least one key in the said keypad area of the portable terminal (pg. 6, para 0066).

Relative to claims 2, Carew et al. further teaches method wherein the said partial information of the said desired text can be any of a stroke, a component, a partial character, a character, a word, a sentence, or their combination (pg. 3, para. 0029)

Relative to claims 5 and 33, Carew et al. teaches an apparatus wherein the said at least one key can be: push-down button, roller button, gliding wheel, rotational switch, optical sensing switch, or bridge-sensing switch (pg. 3, para 0029).

Regarding claim 12, Carew et al. teaches method wherein the said pressing of at least one key or key combination can be pressing numeric key; wherein the said selection of the desired text from the said candidate text can be to select the candidate text associated with a sequence number the same as the number marked on the said pressed numeric key, and wherein the said displaying of the selected text can be to display it in the text editor display area of the screen of the portable terminal (pg. 3, para. 0029).

Regarding claim 13, Carew et al. teaches method step wherein the selection of the desired text from the said candidate text by the said pressing of at least one key or key combination can be pressing at least one navigation functional key to move a cursor to a candidate text and pressing a confirm/select functional key to select this candidate text; and wherein the said displaying of the selected text can be to display it in the text editor display area of the screen of the portable terminal (pg. 3, para. 0029)

Claims 8 and 36, teach an apparatus wherein the coupling of the sensing unit and at least one key in a keypad area of the portable terminal can be electronically combined and share an electronic circuit of the said sensing unit and that of the said at least one key. It being obvious to a person of ordinary skill in the art electrically coupling of the sensing unit at least one key can be combined and share an electronic circuit. The practice of coupling multiple units in a package and in turn said units sharing compatible circuits is well known and in common practice in the art.

Claim 10 teaches a method step wherein a sensing object can be: human finger, input stylus or pen-shaped objects. The practice of using a stylus as a sensing object is well known and in common practice in the art.

Regarding claims 14, 15 and 16, a method step wherein the generation of at least one candidate text of the desired text further comprises the step of pressing at least one of the said at least one key to delete at least one candidate text; and wherein the said generation of the at least one candidate text of the desired text, further comprises the step of pressing at least one of the said at least one key to change the order of the said at least one candidate text; and wherein the said generation of the at least one candidate text of the desired text, further comprises the step of pressing at least one of the said at least one key to insert at least one candidate text. Each of these steps of manipulating data being displayed on a display unit is done with the manipulation of the display key/s. These method steps are well known and in common practice in the art.

4. Claims 9, 17, 26, 37, 40 and 48 are rejected under 35 U.S.C. 103(a) as being

unpatentable over (MOYKC) as applied to claims 1 and 31 in item 3 hereinabove, and further in view of Kikinis (USP 5,220,521).

Relative to 9 and 37, (MOYKC)* does not teach an apparatus wherein the said coupling of the said sensing unit and the at least one key in the said keypad area of the portable terminal can be mechanically combining and sharing the mechanical structure of the said sensing unit and that of a plurality of the said at least one key.

Kikinis teaches a flexible keyboard for computers (col. 2, lines 15-23); Kikinis further teaches an apparatus wherein the said coupling of the said sensing unit and the at least one key in the said keypad area of the portable terminal can be mechanically combining and sharing the mechanical structure of the said sensing unit and that of a plurality of the said at least one key. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov taken with Carew et al. the feature as taught by Kikinis in order to provide the means for connection between the terminal keys and the sensing unit.

Regarding claims 26 and 48, Kikinis further teaches an apparatus wherein the said sensing units are placed under the surface of the said at least one key and under the surface area between the said keys of the portable terminal, to form sensing surface (col. 2k lines 15-22)

Relative to claims 17 and 40, Kikinis further teaches an apparatus wherein the said sensing surface is formed by printing the said sensing units on the surface area of the at least one key and the surface area between the said keys of the portable terminal. It being understood that the practice structuring sensing units covering keyboard keys is well known and in common practice in the art.

Claim 30 teaches a method wherein the said desired text can be in alphabetical letters, Chinese characters, Japanese characters, and other hieroglyphs and symbols. It being understood the selecting from a variety of different text forms is in common practice and well known in the art.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over (MOYKC)* as applied to claims 1 in item 3 hereinabove, and further in view of Knox (Pub. No. US 2001/0009570).

Relative to 18, (MOYKC)* does not teach a method wherein the said sensing unit is a contact switch.

Knox teaches a wireless data transceiver (pgs. 2-3, paras. 0021-0026); Knox further teaches a method step wherein the said sensing unit is a contact switch. (pg. 4, para. 0036).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov taken with Carew et al. the feature as taught by Knox in order to utilize a contact switch technology compatible with the product being developed.

6. Claims 19, 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over (MOYKC)* as applied to claims 31 in item 3 hereinabove, and further in view of An et al. (USP 5,936,614).

Regarding claims 19, 38 and 41, (MOYKC)* does not teach an apparatus wherein the said sensing surface is formed by placing at least one sensing unit on the surface of the at least one key of the portable terminal and on the surface of the space between the said keys.

An et al. teaches a user defined keyboard entry system (col. 1, lines 61-67 and col. 2, lines 1-67); An et al. further teaches an apparatus wherein the said sensing surface is formed by placing at least one sensing unit on the surface of the at least one key of the portable terminal and on the surface of the space between the said keys (col. 9, lines 48-51).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov taken with Carew et al. the feature as taught by An et al. in order to provide an even sensor layer over the entire keypad area.

7. Claims 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over (MOYKC)* as applied to claims 31 in item 3 hereinabove, and further in view of Nassimbene (USP ,440,515).

Relative to claim 39, (MOYKC)* does not teach an apparatus wherein the said sensing unit is a contact switch.

Nassimbene teaches a keybar keyboard (col. 1, lines 39-62); Nassimbene further teaches an apparatus wherein the said sensing unit is a contact switch. (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov taken with Carew et al. the feature as taught by Nassimbene in order to utilize a contact switch technology compatible with the product being developed.

8. Claims 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over (MOYKC)* as applied to claims 31 in item 3 hereinabove, and further in view of Sachdeva et al. (Pub. No. 2004/0029608).

Regarding claims 50 and 51, (MOYKC)* does not teach an apparatus wherein the said portable terminal is a mobile handset; and wherein the said keypad area can be the keypad area of a mobile handset.

Sachdeva et al. teaches a mobile handset (pg. 1, paras. 0006-0008); Sachdeva et al. further teaches an apparatus wherein the said portable terminal is a mobile handset; and wherein the said keypad area can be the keypad , area of a mobile handset (pg.3, para. 0034).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by McCormick taken with Otobe in view of Yanagisawa et al. and further in view of Kisliakov taken with Carew et al. the feature as taught by Sachdeva et al. in order to put in place a portable terminal with a keypad in a mobile handset.

Allowable Subject Matter

9. Claims 3, 4, 11, 20-25, 27, 32, 42-47 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reading claim 3, the major difference between the teachings of the prior art of record (McCormick (Pub. no US 2002/0035484), taken with Otobe (Pub. No. US 2004/0010599) in view of Yanagisawa et al. (Pub. No. US 2002/0046887) and further in view of Kisliakov (Pub. No. US 2003/0212635) taken with Carew et al. (Pub. No. US 2003/0154069)) and that of the instant invention is that said prior art of record does not teach method step wherein the said partial information written with the said sensing object on the said sensing surface can be stroke or stroke combination of the said desired text, the said at least one text candidate generated from the said processing of the said multidimensional coordinates data and displayed on the screen of the portable terminal can include text component such as radical, letter and affix, further comprises the steps of: Selecting a text component from the said at least one text candidate by pressing at least one of the at least one key in the keypad area of the portable terminal; generating, via the microprocessor of the portable terminal, at least one associated text candidate corresponding to the said selected text component; displaying at least one of the at least one associated text candidate on the screen of the portable terminal, in place of the previous said at least one text candidate; if the desired text is not in display, the method could further comprise the steps of: writing, with the said sensing object on the said sensing surface, at least one additional stroke or stroke combination of the desired text to form a new trajectory of movement, wherein the said additional stroke or stroke combination is not part of the said selected text

component; generating, via the said sensing unit, multidimensional coordinates data of the said at least one additional stroke or stroke combination of the desired text from the said trajectory of movement of the said sensing object on the said sensing surface; generating, via the microprocessor of the said portable terminal processing the said multidimensional coordinates data and the said selected text component, at least one candidate text that may further include text component such as radical, letter and affix; displaying at least one of the said at least one candidate text on the screen of the portable terminal. the above steps can be repetitively applied until the desired text is in display.

Reading claims 4 and 32 , the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record does not teach method step wherein the said wherein the said sensing unit can be capacitive, generating multi-dimensional coordinates data through measuring the capacitance or the change of capacitance of the sensing unit; or resistive, generating multi-dimensional coordinates data through measuring the resistance or the change of resistance of the sensing unit; or inductive generating multi-dimensional coordinates data through measuring the inductance or the change of inductance of the sensing unit or the combination of two or more of these types

Regarding claim 11, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record does not teach a method step whereto the screen of the portable terminal has a text editor display area and a candidate text display area, further comprises the steps of: designating the most probable first candidate text as current text and displaying it in the text editor display area of the screen of the portable terminal; generating at least one associated candidate text of the said current text, wherein the generation is

from the microprocessor of the portable terminal processing the knowledge of the said current text, wherein the said knowledge is retrieved from a knowledge base; Displaying at least one associated candidate text in the candidate text display area of the screen of the portable terminal; selecting one of the said associated candidate text by pressing at least one key of the said at least one key, wherein the said associated candidate text can be character, word phrase, sentence or their combination; displaying the selected associated candidate text in the said text editor display area of the screen of the portable terminal.

Reading claims 20 and 42, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record does an apparatus wherein the said contact switch is made of electrically conductive material and is connected to at least one resistor; wherein the said sensing area is formed by arranging a plurality of the said contact switches as a matrix on the surface area of the said at least one key and the surface area between the said keys; wherein each of the said contact switch is numbered and taken as a data sampling point; wherein the said multi-dimensional coordinates data is generated by electronically coupling at least one of the said contact switches with a conductive sensing object electronically touching the said sensing surface; wherein the said number of the at least one touched conduct switch is sent as coordinate data to the microprocessor of the portable terminal for processing; wherein the said at least one key is triggered when the said conductive sensing object pressing the said key and causing electronic connection of the conductive switch; wherein the microprocessor recognizes the pressed key and takes corresponding actions.

Reading claims 27 and 49, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record does not teach an

apparatus wherein the said sensing unit is made up of at least one contact switch made of electrically conductive materials, and each of the said contact switch is electronically connected to at least one resistor, at least one capacitance, and at least one diode to form a capacitive sensing component; wherein the said sensing surface is formed by at least one capacitive sensing unit placed as a matrix under the surface of the at least one key and the surface of the keypad area; wherein the said multidimensional coordinates data comes up when the said sensing object is placed on or near the said sensing surface in the keypad area to cause capacitive effects with the sensing units underneath, and when the said sensing object slides on the surface to form a trajectory of movement; the said multidimensional coordinates data is to be used by the microprocessor of the portable terminal for recognition process; wherein the said at least one key turns on when a finger-like object pushes the said key to cause a layer of conductive material inside the key to electronically connects the underneath contact switch; the microprocessor determines which key is pressed and carries corresponding functions.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pub. No. US 2003/0025679 Taylor et al

To Respond

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINCE E. KOVALICK whose telephone number is (571)272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629

/Vincent E Kovalick/
Examiner, Art Unit 2629
January 14, 2010

Application/Control Number: 10/593,121
Art Unit: 2629

Page 15